

UNITED STATES PATENT AND TRADEMARK OFFICE

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HAVERSTOCK & OWENS LLP			MILLER, JONATHAN R		
	WOLFE ROAD E, CA 94086		ART UNIT	PAPER NUMBER	
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Please find below and/or attached an Office communication concerning this application or proceeding.

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	Application No.	Applicant(s)	——————————————————————————————————————			
	10/637,188	AFSARI, FAROOK				
Office Action Summary	Examiner	Art Unit				
	Jonathan R. Miller	3653				
The MAILING DATE of this communication of the Period for Reply	ation appears on the cover sheet w	ith the correspondence addres	ss			
A SHORTENED STATUTORY PERIOD FOR THE MAILING DATE OF THIS COMMUNIC. - Extensions of time may be available under the provisions of after SIX (6) MONTHS from the mailing date of this communication. If the period for reply specified above, the maximum stature of the period for reply within the set or extended period for reply with Any reply received by the Office later than three months after earned patent term adjustment. See 37 CFR 1.704(b).	ATION. 37 CFR 1.136(a). In no event, however, may a lication. days, a reply within the statutory minimum of thi tory period will apply and will expire SIX (6) MOI II, by statute, cause the application to become A	reply be timely filed rly (30) days will be considered timely. NTHS from the mailing date of this commu BANDONED (35 U.S.C. § 133).	unication.			
Status						
1) Responsive to communication(s) filed	on 6/6/05.					
) This action is non-final.					
	Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under <i>Ex parte Quayle</i> , 1935 C.D. 11, 453 O.G. 213.					
Disposition of Claims						
4) Claim(s) 1-69 is/are pending in the apple 4a) Of the above claim(s) is/are 5) Claim(s) is/are allowed. 6) Claim(s) 1-69 is/are rejected. 7) Claim(s) is/are objected to. 8) Claim(s) are subject to restriction	withdrawn from consideration.					
Application Papers						
9) The specification is objected to by the I	Examiner.					
10) The drawing(s) filed on is/are: a	a) accepted or b) objected to	by the Examiner.				
Applicant may not request that any objection	=: :	, ,				
Replacement drawing sheet(s) including the 11) The oath or declaration is objected to be						
Priority under 35 U.S.C. § 119						
	ocuments have been received. Ocuments have been received in A the priority documents have been al Bureau (PCT Rule 17.2(a)).	Application No I received in this National Sta	ge			
Attachment(s)						
1) Notice of References Cited (PTO-892)	4) 🔲 Interview	Summary (PTO-413)				
 Notice of Draftsperson's Patent Drawing Review (PTC 3) Information Disclosure Statement(s) (PTO-1449 or PT Paper No(s)/Mail Date 		s)/Mail Date nformal Patent Application (PTO-152 	2)			

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DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless -

- (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.
- 2. Claims 1 69 are rejected under 35 U.S.C. 102(b) as being anticipated by Christian et al. The reference discloses a plurality of sorting devices for receiving an input feed of different colored objects and sorting the different colored objects into a plurality of output feeds, wherein at least one output feed in the plurality of output feeds is a subsequent input feed to one or more sorting devices in the plurality and further wherein at least one of the plurality of sorting deviced sorts the different colored objects into more than two output feeds (Figs. 2 and 12; col 7, lines 55+).
- 3. With regards to claim 2, the reference further discloses the one or more sorting devices sort the at least one subsequent input feed into a plurality of further sorted output feeds (Fig. 12).
- 4. With regards to claim 3, the reference further discloses a final sorting device, wherein the final sorting device sorts one or more subsequent input feeds into a plurality of final output feeds (Fig. 11).
- 5. With regards to claims 4, 21, 34, the reference further discloses at least one of the of output feeds contains objects of a desired color (Fig. 11).

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6. With regards to claims 5, 19, 32, 45, the reference further discloses at least one of the of output feeds contains undesired objects, wherein the undesired objects are directed to a rejection bin (Fig. 2).

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- 7. With regards to claims 6, 20, 33, the reference further discloses at least one of the of output feeds contains flint objects (Fig. 12). Examiner contends that the clear glass (shown in Fig. 2) inherently encompasses flint glass.
- 8. With regards to claim 7, the reference further inherently discloses the final sorting device directs each of the plurality of final output feeds into a plurality of corresponding storage bins (Fig 12).
- 9. With regards to claims 8, 22, 36, the reference further discloses the objects are glass cullets (abstract).
- 10. With regards to claims 9, 23, 37, 51, 64, the reference further discloses each sorting device sorts the received different cullets based on light transmission properties of the colored cullets (col. 3, lines 1+).
- With regards to claims 10, 24, 38, 52, 65, the reference further discloses each sorting device further comprises a light emitting source for transmitting at least one light of predetermined frequency through the glass cullet (col. 3, lines 1+).
- 12. With regards to claims 11, 26, 40, 53, 66, the reference further discloses each sorting device further comprises a sensor module coupled to the light emitting source and configured to receive light transmitted through the glass cullet, wherein the sorting device determines the color of the cullet from the at least one light received (col. 3, lines 1+).

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- 13. With regards to claims 12, 25, 39, 54, 67, the reference further discloses the light emitting source includes one or more of a red light emitting diode, a green light emitting diode, a blue light emitting diode and an infrared light source (col. 3, lines 1+).
- 14. With regards to claim 13, 41, 55, 68 the reference further discloses at least one actuator coupled to the sensor module, wherein the at least one actuator directs the cullet to one of the output feeds depending on a signal provided by the sensor module (col. 3, lines 1+).
- 15. With regards to claims 14, 27, 28, 42, 56, 69, the reference further discloses at least one actuator coupled for directing the object to one of output feeds depending on a color characteristic of the object (col. 3, lines 1+).
- 16. With regards to claim 15, the reference further discloses a method of effectively sorting a group of different colored objects into separate groups of similar colored objects comprising: a. receiving an input feed having a plurality of objects; and b. sorting the input feed into more than two output feeds, wherein at least one output feed in the plurality of output feeds serves as a subsequent input feed (Fig. 2).
- 17. With regards to claims 16, 30, the reference further discloses further sorting the at least one subsequent input feed into a plurality of subsequent output feeds (Fig. 2).
- 18. With regards to claims 17, 31, the reference further discloses receiving at least one of the plurality of subsequent output feeds and sorting the received the at least one subsequent input feeds into a plurality of final output feeds (Fig. 11).
- 19. With regards to claims 18, 35, the reference further inherently discloses directing each of the plurality of final output feeds into a corresponding container (Fig. 12).

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20. With regards to claim 29, the reference further discloses a method of effectively sorting different colored objects into a plurality of groups of objects having a similar desired quality, the

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method comprising: a. providing a plurality of sorting devices, wherein each sorting device

receives a mixture of objects of different qualities and separates the different received objects

into two or more output feeds, each output feed having objects of a substantially similar quality;

and b. configuring the plurality of sorting devices such that at least one output feed in each of

one or more sorting devices in the plurality is input into a corresponding subsequent sorting

device (Fig. 2).

21. With regards to claim 43, the reference further discloses a multi-level sorting system for separating different colored cullets into cullets having substantially similar color characteristics

comprising: a. a first means for sorting the cullets, wherein the first means for sorting directs the

sorted cullets into more than two first output paths; b. a second means for further sorting at least

one received first output path, wherein the second means for sorting directs the further sorted

cullets into more than two second output paths; c. a third means for subsequently sorting at least

one received first output path and at least one received second output path, wherein the third

means for sorting directs the subsequently sorted cullets into more than two output paths (Figs. 2,

11 and 12).

22. With regards to claim 44, the reference further discloses a multi-level sorting system for

separating a mixed stream of colored cullets into cullets having substantially similar color

characteristics comprising: a. a first stage tri-sorter for sorting the cullets, wherein the first stage

tri-sorter directs the sorted cullets into a plurality of first output paths; b. a second stage tri-sorter

coupled to the first stage tri-sorter, the second stage tri-sorter for sorting cullets in at least one

and parallel paths (Figs. 2 and 11).

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received first output path, thereby forming second sorted cullets, wherein the second stage trisorter directs the second sorted cullets into a plurality of second output paths; a third stage trisorter coupled to the first and second stage tri-sorters, the third stage tri-sorter for sorting cullets in at least one received first output path and at least one received second output path, thereby forming third sorted cullets, wherein the third stage tri-sorter directs the third sorted cullets into a plurality of third output paths (Fig. 2). Examiner contends that the sorters disclosed in Fig. 2 are tri-sorters, as they can in unison sort into three groups of outputs. What is a tri-sorter? The claim does not require a tri-sorter to have three distinct outputs. Additionally, the reference discloses a sorter with three distinct outputs (Fig. 12) and the ability to link the sorters in series

- 23. With regards to claims 45, 58, the reference further discloses cullets in one of the plurality of first output paths are sent to a rejected material bin (Fig. 2).
- 24. With regards to claims 46, 59, the reference further discloses cullets in one of the plurality of second output paths are sent to a rejected material bin (Fig. 11).
- 25. With regards to claims 47, 60, the reference further discloses cullets in one of the plurality of second output paths are sent to a high quality flint cullet bin (Fig. 2). The reference inherently discloses that the sorting can take place in a different order (col. 2, lines 50; Fig. 5)
- 26. With regards to claims 48, 61, the reference further discloses cullets in one of the plurality of third output paths are sent to a high quality green cullet bin (Fig. 2). The reference inherently discloses that the sorting can take place in a different order (col. 2, lines 50; Fig. 5)

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- 27. With regards to claims 49, 62, the reference further discloses cullets in one of the plurality of third output paths are sent to a rejected material bin (Fig. 2). The reference inherently discloses that the sorting can take place in a different order (col. 2, lines 50; Fig. 5)
- 28. With regards to claims 50, 63, the reference further discloses cullets in one of the plurality of third output paths are sent to a high quality brown cullet bin (Fig. 2). The reference inherently discloses that the sorting can take place in a different order (col. 2, lines 50; Fig. 5)
- With regards to claim 57, the reference further discloses a multi-level sorting system for separating a mixed stream of colored cullets into cullets having substantially similar color characteristics comprising: a. a plurality of first stage tri-sorters for sorting the cullets, wherein the plurality of first stage tri-sorters direct the sorted cullets into a plurality of first output paths; b. a second stage tri-sorter coupled to the plurality of first stage tri-sorters, the second stage tri-sorter for sorting cullets in at least one received first output path from each first stage tri-sorter, thereby forming second sorted cullets, wherein the second stage tri-sorter directs the second sorted cullets into a plurality of second output paths; a third stage tri-sorter coupled to the plurality of first stage tri-sorters and the second stage tri-sorter, the third stage tri-sorter for sorting cullets in at least one received first output path from each of the plurality of first stage tri-sorters and at least one received second output path, thereby forming third sorted cullets, wherein the third stage tri-sorter directs the third sorted cullets into a plurality of third output paths (Fig.
- 2). Examiner contends that the sorters disclosed in Fig. 2 are tri-sorters, as they can in unison sort into three groups of outputs. What is a tri-sorter? The claim does not require a tri-sorter to have three distinct outputs. Additionally, the reference discloses a sorter with three distinct outputs (Fig. 12) and the ability to link the sorters in series and parallel paths (Figs. 2 and 11).

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30. Claims 29-38, 40 – 42, 44 - 53, 55 – 66, 68 and 69 are rejected under 35 U.S.C. 102(b) as being anticipated by Ichise et al. The reference discloses a method of effectively sorting different colored objects into a plurality of groups of objects having a similar desired quality, the method comprising: a providing a plurality of sorting devices, wherein each sorting device receives a mixture of objects of different qualities and separates the different received objects into two or more output feeds, each output feed having objects of a substantially similar quality; and b. configuring the plurality of sorting devices such that at least one output feed in each of one or more sorting devices in the plurality is input into a corresponding subsequent sorting device (col. 13, lines 1+; Fig. 1).

- With regards to claim 30, the reference further discloses further sorting the at least one subsequent input feed into a plurality of subsequent output feeds (col. 13, lines 1+; Fig. 1).
- With regards to claim 31, the reference further discloses a final sorting device, wherein the final sorting device sorts at least one received subsequent input feed into a plurality of final output feeds (col. 13, lines 1+; Fig. 1).
- With regards to claims 32, 45, the reference further discloses at least one of the output feeds contains undesired objects, wherein the undesired objects are directed to a rejection bin (col. 13, lines 1+; Fig. 1).
- With regards to claim 33, the reference further discloses at least one of the output feeds contains flint objects (col. 13, lines 1+; Fig. 1; col. 1. lines 18+).
- With regards to claim 34, the reference further discloses at least one of the output feeds contains objects of a desired color (col. 13, lines 1+; Fig. 1).

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36. With regards to claim 36, the reference further discloses the objects are glass cullets (abstract).

- With regards to claims 37, 51, 64, the reference further discloses each sorting device sorts the received different cullets based on light transmission properties of the colored cullets (col. 13, lines 1+; Fig. 1).
- 38. With regards to claims 38, 52, 65, the reference further discloses each sorting device further comprises a light emitting source for transmitting at least one light of predetermined frequency through the glass cullet (col. 13, lines 1+; Fig. 1).
- 39. With regards to claims 40, 53, 66, the reference further discloses each sorting device further comprises a sensor module coupled to the light emitting source and configured to receive light transmitted through the glass cullet, wherein the sorting device determines the color of the cullet from the at least one light received (col. 13, lines 1+; Fig. 1; col. 1, lines 18+).
- With regards to claim 41, 55, 68 the reference further discloses at least one actuator coupled to the sensor module, wherein the at least one actuator directs the cullet to one of the output feeds depending on a signal provided by the sensor module (col. 13, lines 1+; Fig. 1).
- With regards to claims 42, 56, 69, the reference further discloses at least one actuator coupled for directing the object to one of the output feeds depending on a color characteristic of the object (col. 13, lines 1+; Fig. 1).
- 42. With regards to claim 35, the reference further discloses directing each of the plurality of final output feeds into a corresponding container (col. 5, lines 62+).
- 43. With regards to claim 44, the reference further discloses a multi-level sorting system for separating a mixed stream of colored cullets into cullets having substantially similar color

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characteristics comprising: a. a first stage tri-sorter for sorting the cullets, wherein the first stage tri-sorter directs the sorted cullets into a plurality of first output paths; b. a second stage tri-sorter coupled to the first stage tri-sorter, the second stage tri-sorter for sorting cullets in at least one received first output path, thereby forming second sorted cullets, wherein the second stage tri-sorter directs the second sorted cullets into a plurality of second output paths; a third stage tri-sorter coupled to the first and second stage tri-sorters, the third stage tri-sorter for sorting cullets in at least one received first output path and at least one received second output path, thereby forming third sorted cullets, wherein the third stage tri-sorter directs the third sorted cullets into a plurality of third output paths (col. 13, lines 1+; Fig. 1). Examiner contends that the sorters disclosed in Fig. 2 are tri-sorters, as they can in unison sort into three groups of outputs. What is a tri-sorter? The claim does not require a tri-sorter to have three distinct outputs.

- 44. With regards to claims 45, 58, the reference further discloses cullets in one of the plurality of first output paths are sent to a rejected material bin (col. 13, lines 1+; Fig. 1).
- 45. With regards to claims 46, 59, the reference further discloses cullets in one of the plurality of second output paths are sent to a rejected material bin (col. 13, lines 1+; Fig. 1). The reference inherently discloses that the sorting can take place in a different order.
- 46. With regards to claims 47, 60, the reference further discloses cullets in one of the plurality of second output paths are sent to a high quality flint cullet bin (col. 13, lines 1+; Fig.
- 1). The reference inherently discloses that the sorting can take place in a different order.
- With regards to claims 48, 61, the reference further discloses cullets in one of the plurality of third output paths are sent to a high quality green cullet bin (col. 13, lines 1+; Fig. 1). The reference inherently discloses that the sorting can take place in a different order.

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48. With regards to claims 49, 62, the reference further discloses cullets in one of the plurality of third output paths are sent to a rejected material bin (col. 13, lines 1+; Fig. 1). The reference inherently discloses that the sorting can take place in a different order.

- With regards to claims 50, 63, the reference further discloses cullets in one of the 49. plurality of third output paths are sent to a high quality brown cullet bin (col. 13, lines 1+; Fig.
- 1). The reference inherently discloses that the sorting can take place in a different order.
- With regards to claim 57, the reference further discloses a multi-level sorting system for 50. separating a mixed stream of colored cullets into cullets having substantially similar color characteristics comprising: a. a plurality of first stage tri-sorters for sorting the cullets, wherein the plurality of first stage tri-sorters direct the sorted cullets into a plurality of first output paths; b. a second stage tri-sorter coupled to the plurality of first stage tri-sorters, the second stage trisorter for sorting cullets in at least one received first output path from each first stage tri-sorter, thereby forming second sorted cullets, wherein the second stage tri-sorter directs the second sorted cullets into a plurality of second output paths; a third stage tri-sorter coupled to the plurality of first stage tri-sorters and the second stage tri-sorter, the third stage tri-sorter for sorting cullets in at least one received first output path from each of the plurality of first stage trisorters and at least one received second output path, thereby forming third sorted cullets, wherein the third stage tri-sorter directs the third sorted cullets into a plurality of third output paths (col. 13, lines 1+; Fig. 1). Examiner contends that the sorters disclosed in Fig. 2 are tri-sorters, as they can in unison sort into three groups of outputs. What is a tri-sorter? The claim does not require a tri-sorter to have three distinct outputs.

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subsequent sorting device (Fig. 1).

Claims 29-35, 42, 44-45, 48, 51, 56-58, 61, 64 and 69 are rejected under 35

U.S.C. 102(b) as being anticipated by Frankel et al. The reference discloses a method of effectively sorting different colored objects into a plurality of groups of objects having a similar desired quality, the method comprising: a. providing a plurality of sorting devices, wherein each sorting device receives a mixture of objects of different qualities and separates the different received objects into two or more output feeds, each output feed having objects of a substantially similar quality; and b. configuring the plurality of sorting devices such that at least one output feed in each of one or more sorting devices in the plurality is input into a corresponding

- 52. With regards to claim 30, the reference further discloses further sorting the at least one subsequent input feed into a plurality of subsequent output feeds (Fig. 1).
- With regards to claim 31, the reference further discloses a final sorting device, wherein the final sorting device sorts at least one received subsequent input feed into a plurality of final output feeds (Fig. 1).
- With regards to claims 32, 45, the reference further discloses at least one of the output feeds (29) contains undesired objects, wherein the undesired objects are directed to a rejection bin (Fig. 1).
- With regards to claim 33, the reference further discloses at least one of the output feeds (49) contains flint objects (Fig. 1).
- With regards to claim 34, the reference further discloses at least one of the output feeds contains objects of a desired color (Fig. 1).

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57. With regards to claim 35, the reference further discloses directing each of the plurality of final output feeds into a corresponding container (Fig. 1).

- With regards to claims 37, 51, 64, the reference further discloses each sorting device sorts the received different cullets based on light transmission properties of the colored cullets (Fig. 1, col. 2, lines 37+).
- With regards to claims 42, 56, 69, the reference further discloses at least one actuator coupled for directing the object to one of the output feeds depending on a color characteristic of the object (Fig. 1).
- 60. With regards to claim 44, the reference further discloses a multi-level sorting system for separating a mixed stream of colored cullets into cullets having substantially similar color characteristics comprising: a. a first stage tri-sorter for sorting the cullets, wherein the first stage tri-sorter directs the sorted cullets into a plurality of first output paths; b. a second stage tri-sorter coupled to the first stage tri-sorter, the second stage tri-sorter for sorting cullets in at least one received first output path, thereby forming second sorted cullets, wherein the second stage tri-sorter directs the second sorted cullets into a plurality of second output paths; a third stage tri-sorter coupled to the first and second stage tri-sorters, the third stage tri-sorter for sorting cullets in at least one received first output path and at least one received second output path, thereby forming third sorted cullets, wherein the third stage tri-sorter directs the third sorted cullets into a plurality of third output paths (Fig. 1). Examiner contends that cullets is intended use and not entitled to patentable weight.

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With regards to claims 45, 58, the reference further discloses cullets in one of the plurality of first output paths are sent to a rejected material bin (Fig. 1, col. 2, lines 37+). Examiner contends that cullets is intended use and not entitled to patentable weight.

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- 62. With regards to claims 48, 61, the reference further discloses cullets in one of the plurality of third output paths are sent to a high quality green cullet bin (Fig. 1). Examiner contends that cullets is intended use and not entitled to patentable weight.
- With regards to claim 57, the reference further discloses a multi-level sorting system for separating a mixed stream of colored cullets into cullets having substantially similar color characteristics comprising: a. a plurality of first stage tri-sorters for sorting the cullets, wherein the plurality of first stage tri-sorters direct the sorted cullets into a plurality of first output paths; b. a second stage tri-sorter coupled to the plurality of first stage tri-sorters, the second stage tri-sorter for sorting cullets in at least one received first output path from each first stage tri-sorter, thereby forming second sorted cullets, wherein the second stage tri-sorter directs the second sorted cullets into a plurality of second output paths; a third stage tri-sorter coupled to the plurality of first stage tri-sorters and the second stage tri-sorter, the third stage tri-sorter for sorting cullets in at least one received first output path from each of the plurality of first stage tri-sorters and at least one received second output path, thereby forming third sorted cullets, wherein the third stage tri-sorter directs the third sorted cullets into a plurality of third output paths (Fig. 1).

Claim Rejections - 35 USC § 112

64. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

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65. Claim 17 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

66. Claim 17, at the end of line 2, is awkward and indefinite.

Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jonathan R. Miller whose telephone number is (571) 272-6940. The examiner can normally be reached on M-F: 8:30AM-5:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Donald P. Walsh can be reached on (571) 272-6944. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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